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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,259	07/18/2003	Steven Michael Hausman	2002P20760US01	3269
7590	11/02/2006		EXAMINER	
Siemens Corporation Intellectual Property Department 170 Wood Avenue South Iselin, NJ 08830			HASSAN, AURANGZEB	
			ART UNIT	PAPER NUMBER
			2182	

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/622,259	HAUSMAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Aurangzeb Hassan	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 08 August 2006.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-32 is/are pending in the application..
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-32 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date: _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/8/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 26 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Thomas et al (US Patent Number 5,649,001 hereinafter “Thomas”).

3. As per claim 26, Thomas teaches a method comprising the activities of: providing a programmable cable comprising a first end connectable to a network (communication interface device, element 20, figure 1) and a second end connectable to a network communications device (communication network/device, element 28, figure 1), a user interface device **couplable** to a network (cellular phone system, column 3, lines 8 – 15); and automatically communicating from the programmable cable to the network communicating device a PIN number and at least one of a plurality of configuration parameters (handshaking and connectivity via communication interface device upon automatic verification of the identification code, column 6, lines 15 – 48, communication adapter cable identification code stored on communication adapter cable in use for cellular telephone network, column 10, lines 47 – 59).

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The Examiner elaborates that Thomas teaches a programmable cable couplable to a network. Thomas teaches a general network and as the claim limitations stand in claim 26, the **couplable** does not necessitate all the proceeding elements but rather puts forth a capability to be coupled to such a network. As claim 26 is a method the claim limitation couplable does not necessitate the particular network comprising particular network elements but rather necessitates the capability of coupling to a network in general which is Thomas' cellular phone system.

4. As per claim 28, Thomas teaches a method wherein the configuration parameters communicated to the network communications device further comprise a network communications device setup string (column 8, lines 45 – 58).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 9 – 12 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas in view of Cisco Systems.

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7. As per claims 9 and 27, Thomas teaches a device comprising: a programmable cable comprising, a first end connectable to a network (**couplable** to a PLC), and a second end connectable to a network communications device (communication network/device, element 28, figure 1); the network communications device further couplable to a user interface device (cellular phone system, column 3, lines 8 – 15);, and said programmable cable programmable to store at least one of a plurality of configuration parameters comprising: a communication language (adapt the modem to a particular country's telephone network, column 1, lines 63 – 67, column 3, lines 1 – 2) and an identifying PIN number (communication adapter cable identification code stored on communication adapter cable, column 10, lines 47 – 59, emphasis added).

Thomas fails to explicitly teach said programmable cable programmable to store at least one of a plurality of configuration parameters comprising: a mode of operation, a PPI protocol, a cable locality mode, and a data transfer speed.

Cisco Systems teaches said programmable cable programmable to store at least one of a plurality of configuration parameters comprising: a mode of operation (Section: Token Ring Operation), a PPI protocol (Section: Frame Format), a cable locality mode (Section: Fault-Management Mechanisms), and a data transfer speed (data rates, figure 9-1).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Thomas with the above teachings of Cisco Systems.

One of ordinary skill in the art would have been motivated to make such modification in order to allow reduce collisions of data on network (Section: Review Questions).

The Examiner asserts that the claim limitations only require the capability to communicate to the PLC but do not necessitate such limitations. Accordingly the programmable cable of Thomas communicates with a computer and network.

8. Thomas modified by the teachings of Cisco Systems as applied to claims 9 and 27 above, as per claim 10, Cisco Systems teaches a device wherein said programmable cable further adapted to, in an operative configuration, serve as a token holding master on the network adapted to multiplex networked communications with the PLC (each station holding token, Section: Token Ring Operation).
9. As per claim 11, Thomas teaches a device wherein in an operative embodiment, said programmable cable adapted to automatically configure the network communications device by communicating at least one of a plurality of configuration parameters to the network communications device (column 8, lines 45 – 58).
10. As per claim 12, Thomas teaches a device wherein said second end of said programmable cable comprises an RS232 network connector (communication over an RS232 serial port, column 1, lines 31 – 37).

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11. Claims 1 – 8, 14 – 17 and 19 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al (US Patent Number 5,649,001 hereinafter "Thomas") in view of Sexton (US Patent Number 6,965,802).

12. As per claim 1, Thomas teaches a system comprising: a cellular telephone modem (cellular phone system, column 3, lines 8 – 15); and a programmable cable (communication adapter cable, element 22, figure 1) comprising a first end connectable to a computer (communication interface device, element 20, figure 1) and a second end connectable to said cellular telephone modem (communication network/device, element 28, figure 1, cellular phone system, column 3, lines 8 – 15); said programmable cable adapted to store at least one of a plurality of configuration parameters comprising a PIN number (identification code, column 6, lines 15 – 20); said programmable cable adapted to, in an operative embodiment, automatically configure said cellular telephone modem by communicating at least one of the configuration parameters to said cellular telephone modem (column 6, lines 15 – 25 and lines 38 – 46).

Thomas fails to specify the type of computer as being a PLC.

Sexton analogously discloses a PLC coupled to cellular phone system.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to define the environment of Thomas' computer coupled to a cellular phone system in an industrial environment as seen above in Sexton. One of ordinary skill in the art would make such modification in order to allow for remote access

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to a computer in an industrial environment avoiding costs incurred when the PLC adversely affects the process it controls (column 1, lines 47 – 53).

The examiner notes that the applicant in the specification background, paragraph 2, lines 1 and 2, states that a PLC is a type of **computer** (emphasis added) utilized in control systems.

13. Thomas modified by the teachings of Sexton as applied in claim 1 above as per claim 2, Thomas teaches a device comprising: a programmable cable (communication adapter cable, element 22, figure 1) comprising a first end connectable to a PLC (communication interface device, element 20, figure 1) and a second end connectable to a network communications device (communication network/device, element 28, figure 1), the network communications device further couplable to a user interface device (cellular phone system, column 3, lines 8 – 15); said programmable cable adapted to store at least one of a plurality of configuration parameters; in an operative embodiment, said programmable cable adapted to automatically configure the network communications device by communicating at least one of a plurality of configuration parameters to the network communications device comprising a PIN number (communication adapter cable identification code stored on communication adapter cable, column 10, lines 47 – 59).

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14. Thomas modified by the teachings of Sexton as applied in claim 1 above as per claim 3, Thomas teaches a device wherein the network interface device is a cellular telephone modem (cellular phone system, column 3, lines 8 – 15).
15. Thomas modified by the teachings of Sexton as applied in claim 1 above as per claim 4, Thomas teaches a device wherein the network interface device is a telephone modem (telephone network, column 1, lines 65 – 67, column 2 lines 1 – 2).
16. Thomas modified by the teachings of Sexton as applied in claim 1 above as per claim 5, Thomas teaches a device wherein the configuration parameters further comprise a setup string for the network interface device (column 8, lines 45 – 58).
17. Thomas modified by the teachings of Sexton as applied in claim 1 above as per claim 6, Thomas teaches a device wherein the network interface device is a couplable to the user interface device via a network (column 8, lines 42 – 59).
18. Thomas modified by the teachings of Sexton as applied in claim 1 above as per claim 7, Thomas teaches a device wherein the network interface device is couplable to the user interface device via a cellular network (cellular phone system, column 3, lines 8 – 15).

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19. Thomas modified by the teachings of Sexton as applied in claim 1 above as per claim 8, Thomas teaches a device wherein the network interface device is couplable to the user interface device via the Internet (column 8, lines 42 – 59).

20. Thomas modified by the teachings of Sexton as applied in claim 1 above as per claim 14, Thomas teaches a method comprising the activities of: providing a programmable cable comprising a first end and a second end, the first end connectable to a PLC (communication interface device, element 20, figure 1), the second end connectable to a cellular telephone modem (communication network/device, element 28, figure 1), a user interface device couplable to a network comprising the programmable cable, the PLC, and the cellular telephone modem (cellular phone system, column 3, lines 8 – 15); and automatically configuring the cellular telephone modem by the programmable cable (handshaking and connectivity via communication interface device upon automatic verification of the identification code, column 6, lines 15 – 48).

21. Thomas modified by the teachings of Sexton as applied in claim 1 above as per claims 15 and 16, Thomas teaches a method wherein said automatically configuring activity occurs during/after a power-cycling of the programmable cable (power-cycling through connection and interchanging of adapter cables and automatically configuring through periodic polling, column 4, lines 17 – 63).

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22. Thomas modified by the teachings of Sexton as applied in claim 1 above as per claim 17, Thomas teaches a method comprising automatically from the programmable cable to the network communications device at least one of a plurality of configuration parameters (column 8, lines 42 – 59).

23. Thomas modified by the teachings of Sexton as applied in claim 1 above as per claims 19 – 21, Thomas teaches a method further comprising initializing the programmable cable using the user interface device through the network by setting at least one of a plurality of configuration parameters comprising a network communications device setup string and a PIN number (communication adapter cable identification code stored on communication adapter cable, column 10, lines 47 – 59).

24. Thomas modified by the teachings of Sexton as applied in claim 1 above as per claim 22, Thomas teaches a method wherein said activity of automatically configuring the cellular telephone modem by the programmable cable further comprises communicating at least one of a plurality of configuration parameters, comprising cellular telephone modem setup string and a PIN number, to the cellular telephone modem (handshaking and connectivity via communication interface device upon automatic verification of the identification code, column 6, lines 15 – 48, communication adapter cable identification code stored on communication adapter cable in use for cellular telephone network, column 10, lines 47 – 59).

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25. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas in view of Sexton further in view of Cisco Systems.

26. As per claim 18, the combination of Thomas and Sexton teaches a device comprising: a programmable cable comprising, a first end connectable to a network couplable to a PLC (communication interface device, element 20, figure 1), and a second end connectable to a network communications device (communication network/device, element 28, figure 1); the network communications device further couplable to a user interface device (cellular phone system, column 3, lines 8 – 15), the PLC communicable with said user interface using said programmable cable (column 6, lines 37 – 48); and said programmable cable programmable to store at least one of a plurality of configuration parameters comprising: a communication language (adapt the modem to a particular country's telephone network, column 1, lines 63 – 67, column 3, lines 1 – 2) and an identifying PIN number (communication adapter cable identification code stored on communication adapter cable, column 10, lines 47 – 59).

The combination of Thomas and Sexton fails to explicitly teach said programmable cable programmable to store at least one of a plurality of configuration parameters comprising: a mode of operation, a PPI protocol, a cable locality mode, and a data transfer speed.

Cisco Systems teaches said programmable cable programmable to store at least one of a plurality of configuration parameters comprising: a mode of operation (Section: Token Ring Operation), a PPI protocol (Section: Frame Format), a cable locality mode

(Section: Fault-Management Mechanisms), and a data transfer speed (data rates, figure 9-1).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Thomas and Sexton with the above teachings of Cisco Systems. One of ordinary skill in the art would have been motivated to make such modification in order to allow reduce collisions of data on network (Section: Review Questions).

27. Claims 13 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas in view of Cisco further in view of Rostoker et al. (US Patent Number 6,978,319)

28. As per claim 13, Thomas teaches a device wherein said second end of said programmable cable comprises a connector (can be utilized with wide variety of communication protocols and a variety of networks, column 3, lines 47 – 54).

Thomas fails to teach a connector that which comprises a USB network connector.

Rostoker et al. analogously teaches a device wherein said second end of said programmable cable comprises a connector comprising a USB network connector (column 5, lines 4 – 11).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Thomas and Cisco with the above

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teachings of Rostoker et al. One of ordinary skill in the art would have been motivated to make such modification in order to allow for "plug-and-play" further allowing transparency on the user end (column 2, lines 63 – 67).

29. Thomas modified by Cisco further modified by the teachings of Rostoker et al. as applied to claim 13 above, as per claim 29, Rostoker et al. teaches a method further comprising monitoring data traffic through the programmable cable using a set of status indicators (status of data present through protocols where the controller notes indication, figure 8).

30. Claims 23 – 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas in view of Sexton further in view of Al-Ali (US Publication Number 2003/0167391).

31. As per claims 23 – 25, the combination of Thomas and Sexton teaches a method further comprising communications between the user interface device and the PLC (computer, column 3, lines 47 – 54), between the programmable cable and the PLC and between the programmable cable and the user interface device (figure 1).

The combination of Thomas and Sexton fails to explicitly teach the limitation of encryption along the communication lines lying therein between.

Al-Ali teaches analogously a method comprising encryption along a cable communicating between interfaces (encryption interface cable, element 700, figure 6).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of Thomas and Sexton with the above teachings of Al-Ali. One of ordinary skill in the art would have been motivated to make such modification in order to allow for exclusive compatibility between interfaces without the necessity of hardware modifications (paragraph [0027]).

32. Claims 30 – 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas in view of Al-Ali (US Publication Number 2003/0167391).

33. As per claims 23 – 25 and 30 – 32, Thomas teaches a method further comprising communications between the user interface device and the PLC (computer, column 3, lines 47 – 54), between the programmable cable and the PLC and between the programmable cable and the user interface device (figure 1).

Thomas fails to explicitly teach the limitation of encryption along the communication lines lying therein between.

Al-Ali teaches analogously a method comprising encryption along a cable communicating between interfaces (encryption interface cable, element 700, figure 6).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Thomas with the above teachings of Al-Ali. One of ordinary skill in the art would have been motivated to make such modification in order to allow for exclusive compatibility between interfaces without the necessity of hardware modifications (paragraph [0027]).

***Response to Arguments***

34. Applicant's arguments filed 8/8/2006 have been fully considered but they are not persuasive. The applicant argues that according to the 37 CFR 1.132 declarations by Dr. Williams Thomas does not teach a programmable logic controller (PLC).

35. Applicant's arguments with respect to claims 1 – 8 and 14 – 25 have been considered but are moot in view of the new ground(s) of rejection.

The scopes of the claims have been changed as per the applicant's amendments and as such necessitate new grounds for rejection.

For further explanation as to how the scope has changed the Examiner expresses how the originally filed claims did not necessitate a PLC. A PLC was listed in the context of communicable or couplable with respect to a network and did not require the PLC as per the claim limitations. The newly amended claims 1 – 8 and 14 – 25 have been modified to necessitate a PLC and accordingly require new grounds for rejection.

36. As per claim 9 the claim limitations express two instances of a PLC. In claim 9 a PLC is said to be couplable and communicable within the device. The Examiner asserts that the words couplable and communicable do not necessitate a PLC being present but instead invokes a capability to be coupled to or communicate with a PLC. Clearly from this citation of the claim limitations one of ordinary skill in the art would

realize that the claim does not necessitate a PLC and the definition and declaration of what a programmable logic controller (PLC) is not required.

37. As per claim 26 the claim limitations express a method claim in which a cable is couplable to a network. Thomas teaches coupling to a network but the claim limitation of couplable does not necessitate the particular type of network in the claim but adheres to the capability to couple to a network as clearly shown in the cellular phone system of Thomas. The PLC is not a required claim limitation and clearly from this explanation one of ordinary skill in the art would realize that the claim does not necessitate a PLC and the definition and declaration of what a programmable logic controller (PLC) is not required.

In order for the Applicant to better understand the rejection the Examiner respectfully makes of the record, the basis of the current rejection with newly cited prior art in light of the first Office Action. In the first Office Action the Examiner cited a computer coupled to a cellular network in the prior art of the record, Thomas. In light of the current application's specification-background, paragraph 2, lines 1 and 2, where the applicant states a PLC is a computer utilized in a control system environment, the Examiner has cited an additional reference Sexton to allow the applicant to understand the environment of the computer in an industrial PLC environment.

In light of the newly cited prior art and what exactly the claim limitations necessitate, the Examiner respectfully holds that the motivation to combine as stated in

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the first Office Action is to be deemed proper and applicable, as the environment has been fully accounted for.

***Conclusion***

38. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aurangzeb Hassan whose telephone number is (571) 272-8625. The examiner can normally be reached on Monday - Friday 9 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AH  
10/25/2006

  
KIM HUYNH  
SUPERVISORY PATENT EXAMINER

10/30/06